AUTODOC CLUB

How to change engine oil and filter on **BMW E46** – replacement guide

VIDEO TUTORIAL

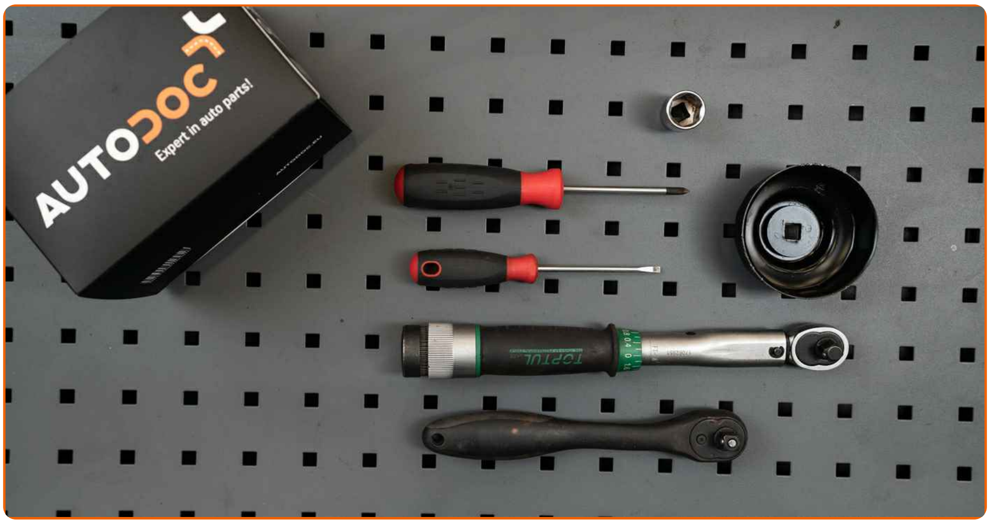


Important!

This replacement procedure can be used for:
BMW 3 Saloon (E36) 316i 1.6, BMW 3 Saloon (E36) 318i 1.8, BMW 3 Saloon (E36) 318is 1.8, BMW 3 Coupe (E36) 318is 1.8, BMW 3 Coupe (E36) 316i 1.6, BMW 3 Convertible (E36) 318i 1.8, BMW 3 Compact (E36) 316i 1.6, BMW 5 Touring (E34) 518g 1.8, BMW 3 Compact (E36) 318ti 1.8, BMW 5 Saloon (E34) 518i 1.8, BMW 3 Coupe (E36) 318is 1.9, BMW 3 Touring (E36) 318i 1.8, BMW 3 Saloon (E36) 318is 1.9, BMW 3 Compact (E36) 318ti 1.9, BMW Z3 Roadster (E36) 1.9 i, (+ 10)

The steps may slightly vary depending on the car design.

REPLACEMENT: ENGINE OIL AND FILTER – BMW E46. TOOLS YOU NEED:



- All-purpose cleaning spray
- Drive socket # 17
- Oil filter cup socket 86/16 F
- Ratchet wrench
- Torque wrench
- Flat Screwdriver
- Phillips screwdriver
- Oil drain pan
- Funnel
- Fender cover

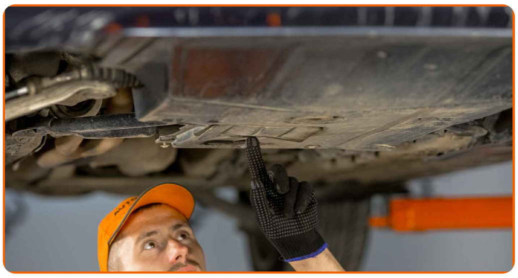
BUY TOOLS

Replacement: engine oil and filter – BMW E46. AUTODOC experts recommend:

- Replace the oil filter every time when changing motor oil.
- Wear gloves to prevent contact with hot liquid.
- Please note: all work on the car – BMW E46 – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Lift the car using a jack or place it over an inspection pit.



Replacement: engine oil and filter – BMW E46. Tip:

- The vehicle must be on even keel, and if it is at an angle, the drain plug must be at the lowest point.

2 Undo the fasteners of the oil pan lower cover. Use a Phillips screwdriver.



3 Remove the oil pan cover.

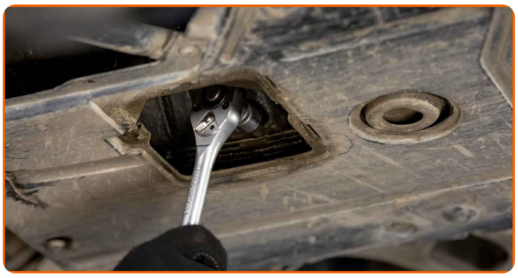
4 Put a waste oil container with at least 5 l capacity under the drainage hole.



5 Clean the area of the oil pan drainage hole. Use all-purpose cleaning spray.



6 Unscrew the drain plug. Use a drive socket #17. Use a ratchet wrench.



7 Drain the used oil.

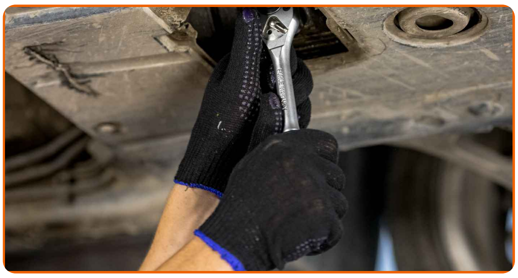


Replacement: engine oil and filter – BMW E46. Tip from AUTODOC:

- Caution! The oil may be hot.
- Wait until the oil has completely drained from the drainage hole.

8 Clean the area of the oil pan drainage hole.

9 Screw in the new drainage plug and tighten it. Use a drive socket #17. Use a torque wrench. Tighten it to 27 Nm torque.

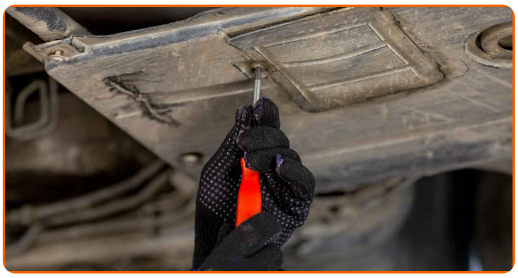


10 Clean the area of the oil pan drainage hole. Use all-purpose cleaning spray.

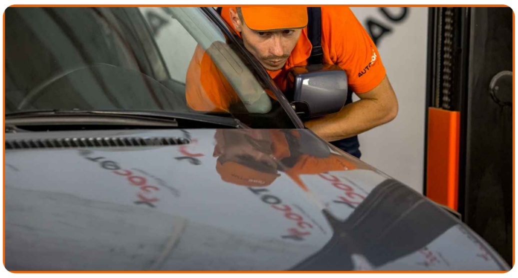
11 Reinstall the oil pan lower cover.



12 Tighten the fasteners of the oil pan lower cover. Use a Phillips screwdriver.



13 Lower the car.

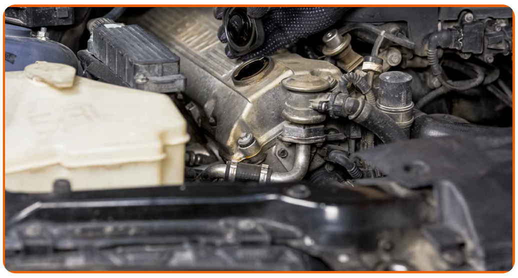


14 Open the hood.



15 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

16 Unscrew the oil filler plug.



17 Unscrew the oil filter. Use the 86/16 F socket. Use a ratchet wrench.



18 Put the old oil filter in the container.



19 Remove the filter element from the filter housing.

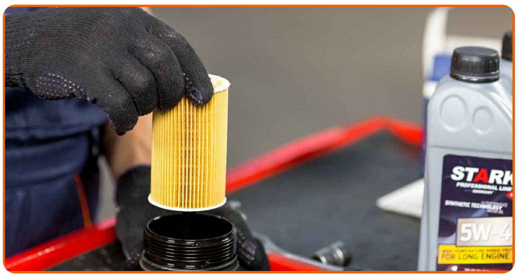


20 Remove old o-rings from the oil filter cover. Use a flat screwdriver.



21 Clean the oil filter housing cap. Use all-purpose cleaning spray.

22 Install new O-rings and a new oil filter to their mounting seats on the filter cover. Use a flat screwdriver.

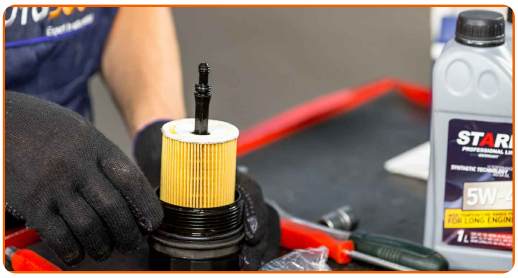


Please note!

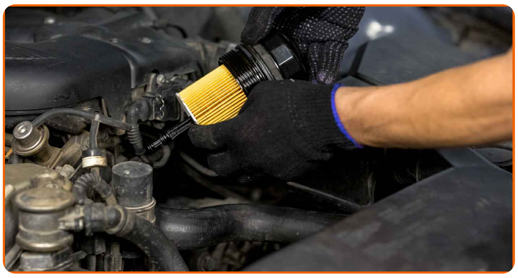
- Make sure to install the filter correctly. Don't mix up the sides of the part.

23 Clean the oil filter seat.

24 Lubricate the rubber seal of the new filter with a little amount of fresh oil.



25 Screw the new filter into its place. Use the 86/16 F socket. Use a torque wrench. Tighten it to 23 Nm torque.



26 Remove the oil filler cap.



27 Insert the funnel.

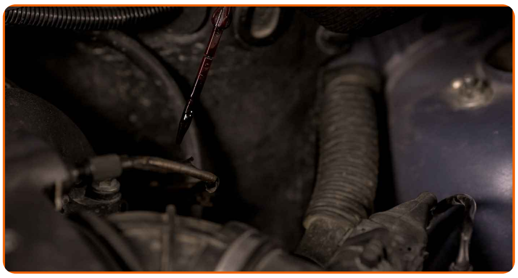
28 Pour oil into the engine through the filler. Required amount of oil: 4 l.



Replacement: engine oil and filter – BMW E46. Professionals recommend:

- Use the oil recommended by the manufacturer.

29 Check the oil level using the dipstick. Top up oil if necessary.



Please note!

- The oil level should be between the Min and Max marks.

30 Install the oil filler cap.



31 Tighten the oil filler cap.

32 Run the engine for a few minutes. After the oil pressure warning light goes out, stop the engine.

33 Check the oil level 5 minutes after the stop of the engine operation using a dipstick and add oil if necessary.



Please note!

- The oil level should be between the Min and Max marks.
- Make sure that the oil filler cap is properly tightened.
- Check the threaded plug of the drainage hole and the oil filter seal for tightness. If necessary, carefully tighten them up.

34 Remove the fender protection cover. Close the hood.



Replacement: engine oil and filter – BMW E46. AUTODOC experts recommend:

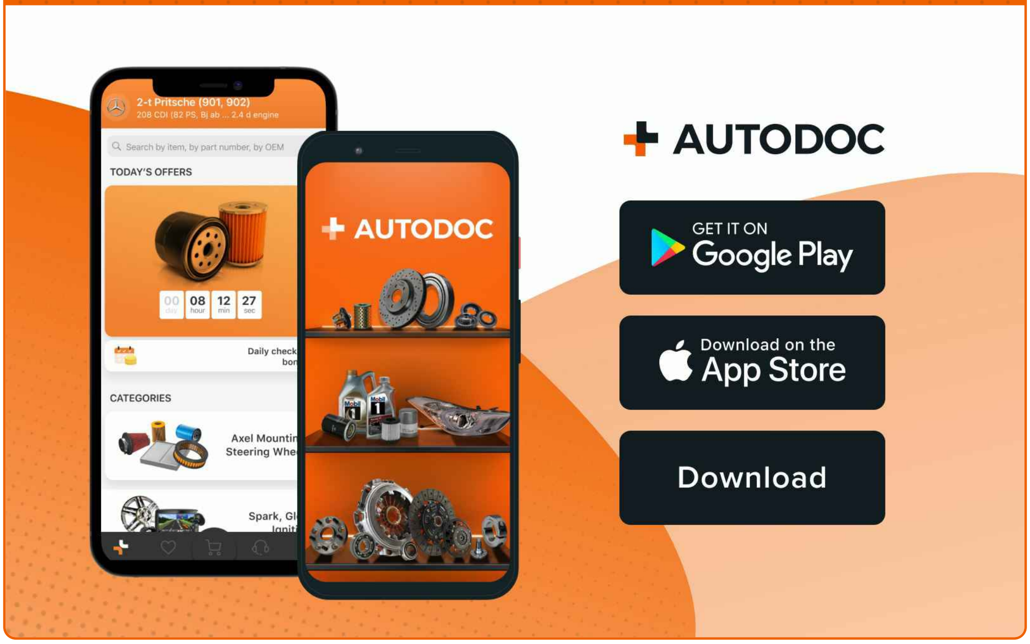
- Note that oil pressure warning light, which indicates insufficient pressure in the lubrication system, may be on for a longer time than usual. After a few seconds, the oil will fill all the channels, and the light will go out.
- To protect the environment from pollution, be sure to dispose of the used filters at special collection points.

WELL DONE!

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